THE SUPERIOR VAPORIZATION TECHNIQUE

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"*The false society—It is commonly observed that for every successful style having become known a flurry of imitators follow; for every masterwork discovered and celebrated, derivations are made by these imitators and they can then cleverly ride along upon the Master's stride. But this too has its innocence—it serves to create the links and gradual steps to the truer light. The common day shines too bright, and only under the mood of candle-light does the Truth pass for secrets.*
This is commonly observed, but what transpires in the Arts unnoticed by the people is the way in which the imitators can come even before the masters, having guessed the answer to the riddle but not yet heard the riddle themselves. Then the original appears alongside the copies, and will be judged as such until Time sifts the seeds from the Harvest." Mayo

I. **Introduction and Background**

Vaporization has been recognized as a preferred means by which to rapidly and effectively deliver the active constituents in commonly smoked or orally administered herbal materials without the drawbacks of the conventional delivery mediums. Vaporization is superior to smoking because it enables the rapid onset inhalation based delivery of the active constituents without the concurrent delivery of numerous irritants and likely carcinogens contained in the smoke because it prevents the concurrent pyrrolysis that takes place with combustion of the plant material and the active essential oils it contains. By eliminating the pyrrolysis, vaporization enables a significant improvement in the substance (cleaner), potency (200-400% more potent than smoke), and taste of the inhalation. Vaporization is superior to oral administration methods such as teas, tinctures, and capsules because it doesn't suffer from the delayed onset of the desired therapeutic actions and enables the bypassing of the body's digestive organs by going straight from the tracheo-bronchial tree to the bloodstream. In many studies on medicinal herbs researchers have affirmed and demonstrated the safety and effectiveness of the various active constituents for a variety of medical applications, but expressed concern regarding the likely side effects and drawbacks of conventionally preferred delivery methods. The recommendation of further studies on alternative delivery mediums that have shown promise, such as vaporization, has been made repeatedly without follow through for a lack of financial support. Magazines and medical journals of relevance have reported on the potential health advantages of vaporization of the active constituents in herbs over smoking the whole herb or oral administration, but either altogether fail to offer a truly effective and realistic means by which to do so, or mention the clumsy heating element / tray / collection chamber mechanisms widely advertised and as seen in some smoke shops for sale either in the form of the actual vaporizer mechanism or in the form of the directions with which to assemble your own similar construct. With the increasing awareness of vaporization as an advantageous delivery medium more vaporization systems with improved usage of today's technologies have become available on the market, but all suffer from one short- coming or another that prevents them from being broadly adapted.

The greatest problem with such mechanisms besides their clumsy and inconvenient size and shape isn't so much that they don't effectively vaporize the

active aromatherapeutic compounds; one of the commercially available ones or one correctly constructed will accomplish the task, but more with the actual process with which they do it. For one thing, the familiar and centuries old ritual of smoking with a pipe: the packing of the bowl, taking of an inhalation, and repacking and passing on to the next participant (in the case of group aromatherapy) is destroyed; each participant's inhalation takes considerably longer than a normal combustion based smoke inhalation would as the material is heated for vaporization purposes, the released vapor collected for inhalation…and then finally inhaled. The process must then be repeated. Secondly, if you've ever taken an inhalation from one of these constructs you'll agree that the taste of the inhalation is usually more along the lines of "burnt popcorn" than what all of us who indulge in the finer aromatherapeutic herbs the world has to offer have come to appreciate. And thirdly, perhaps most importantly, much of the normally perceived and desired physioactive effects are altered or minimized due to inefficient extraction capabilities and oxidation of the active vapor constituents into less active components during the collection and delivery phase. And in comparison to oral administration, the systems used for vaporization thus far take as long as brewing a cup of tea and much longer than downing a capsule or some tincture, and generally speaking aren't as passive or relaxing of an experience. It is the opinion of the author that it is due to these shortcomings with the process involved with existing vaporization techniques that vaporization has not been popularly embraced even given its tremendous advantages over traditional delivery mediums.

A few of the published articles and papers that have addressed vaporization have inferred the possibility of using a heat gun to vaporize aromatherapeutic herbs in the bowl of a conventional smoking pipe (obviously a pipe in which the bowl is far enough from the user's face for safety purposes) or water pipe, but have either left it at that, an inferred possibility, or gone on to mention the factors complicating effective heat gun vaporization. Various vaporization apparatuses that function much like conventional vaporizers (heat, collect, then inhale) except for using a heat gun's forced heat flow instead of a heat tray have been developed and demonstrate the effectiveness of a heat gun for convective vaporization purposes, and if used correctly solve the taste dilemma (which is caused by the heat tray's contact with the herbal material and/or insufficient temperature control resulting in higher than necessary temperatures; a weakness of radiant based approaches), but still suffer from some of the same shortcomings of conventional vaporizers: loss of ritual, sustained collection before inhalation leading to oxidation, and thus, so far have resisted popular adoption. The fact that an effective means by which to utilize a heat gun to vaporize in a conventional bowl would allow for the ritual that is so much of the smoking experience to be left relatively in tact and the process to be relatively quick, along with the fact that a heat gun would be far more convenient as a heat source and could save smokers from having to part with their beloved water pipes inspired the author's research into this possibility as the health merits

of vaporization as opposed to smoking and rate of delivery as opposed to oral administration are simply too great to take for granted.

The problem with trying to use heat guns for vaporization purposes is that the temperature settings (i.e. high and low on dual temperature heat guns or non-calibrated rotary ranges on some others) on common heat guns don't provide precise enough temperature control while the nozzles, which are usually around the size of those found on hairdryers, don't provide adequate concentration of the heat flow for use with a typical smoking pipe bowl which has an intake that is considerably smaller, and in addition to these problems is the rate of air flow which is generally so great your aromatherapeutic herbal material would be blown right out of the bowl before it could be heated to the necessary point; leaving only usage with expensive oils and concentrates viable.

With some research and some trial and error, a few tunable, affordable (relatively speaking anyway), and available high-end heat gun models that enabled an effective answer to all of these inherent problems were found: the *Superior Vaporization Technique* or SVT relies on advanced heat gun technology. These heat guns all feature ceramic encapsulated heating elements to ensure a long tool life and clean non-metallic heat, thermocouple controls which enable a consistent and precise micro-adjustable temperature setting via a calibrated rotary dial, an air flow adjustment capable of low enough air volume settings, as well as available reducer nozzles which work great for creating a concentrated enough heat flow for effective vaporization capability with conventional bowls. Further research and SVT user feedback led to the development of a specialized bowl intended specifically for heat gun enabled SVT vaporization and compatible with virtually any of the many commonly available water pipe and heat gun designs: the VripTech Vaporization Chamber Bowl or VCB, U.S. Patent #6,354,301/ U.S. and International patents pending. The VCB is designed to be more user-friendly, to enable consistently repeatable results, and to enable the most efficient and fastest extraction possible.

II. **Requirements; Settings; and Recommendations**

The first requirement for the *Superior Vaporization Technique*, now obvious, is the heat gun itself. The recommended models include many of the Steinel made (both private label and Steinel brand) heat guns: the Makita HG1100, the Steinel HL 2002 LE or HG 3002 LCD (HL 2005 E or HL 2305 LCD for International 230/240V users), the Sear's Craftsman part# 27801 (which is basically a Steinel HL 2002 LE with the Craftsman name on it), and the Bosch 1943 or 1947. The prices range from $62+ for the Makita on up to over $190 for the Steinel 3002 LCD and the Bosch 1947. Some will be harder to find than others (see the Implement Sources section that follows), but all are available. The feature differences that account for the price range include different kinds of switches, optional LED or LCD temperature displays, and on all but the Makita, the ability to run the fan separate from the heating element for quick cool down of

the nozzle. Although some other less expensive heat guns can be used to varying levels of success if one of the heat settings is in the right temperature range (generally the “low” setting on dual temperature models) and by altering the distance from the nozzle to the bowl and with such incorporated modifications as an attached stainless steel kitchen funnel or makeshift foil reducer nozzle to concentrate the air flow, the *Superior Vaporization Technique* will require one of the recommended guns and a reducer nozzle or Vaporization Chamber Bowl for optimum results (reducer nozzle unnecessary if Vaporization Chamber Bowl is to be used exclusively). The less expensive heat guns are not recommended because the heating elements they use are not ceramic encapsulated and will eventually give off metal ions as they get used. **It is recommended that a new heat gun be used to avoid any possible residue contamination from prior utility use and that prior to vaporization usage the heat gun is first run at maximum temperature and maximum airflow in a well vented area for 20-30 minutes or longer with the fan on high to burn-off any residue from the production process that may be present.**

The second requirement is obviously a pipe with a bowl sufficiently far enough from the user's face and body for safety reasons. Recommended for optimal results is the VripMaster High Performance Vaporization Water Tool (VWT), or alternatively, any water pipe with a smaller inner diameter (1.5"-1.875"), mostly straight bore (stay away from too many fancy bubbles and curves), slider-bowl type glass water pipe, 9” to 18” tall not including the base. Conventional smoking bowls should be switched out for the VripTech International Vaporization Chamber Bowl (VCB) for optimum results, or alternatively, a deep, one-inhalation v-style bowl (the ones with a larger hole work best) preferably made from pyrex glass should be used.

The third requirement, also obvious, is some good and applicable aromatherapeutic herbal materials to vaporize; preferably not too dry and loose if you're using a conventional bowl and the reducer nozzle as you'll want it to be able to withstand the externally applied air flow and not jump out of the bowl. If this becomes a problem a small piece of stainless screen can be fashioned to cap the bowl after it is packed. This nuance and occasional problem is effectively addressed within the design of the VripMaster Vaporization Chamber Bowl (VCB). Herbal material should be finely chopped or broken apart before packing for best results as the more surface area exposed to the heat the more efficient the extraction and resulting vapor release.

Aromatherapeutic herbs can all be effectively vaporized within a 260F-390F temperature range for clean vaporization and phyto-inhalation. We know from the NORML M-1 Volatizer study that benzene, a harmful component in smoke begins to appear at 392 degrees F and above. More studies (very expensive studies) need to be done to determine at exactly what temperature what active components vaporize and at what temperatures what harmful components appear. Your support of organizations like NORML helps to make these studies happen.

Because the active constituents in many herbs release across a broad temperature range: often over 100 degrees F, the exact vaporization temperature of a specific aromatherapeutic herb is often a matter of debate. Also, because of this broad range you can only physically get full spectrum vapor by extracting and delivering it fast and efficiently from only one or two inhalations worth of raw herb at a time; the aromatic turpenes that give you the flavor will release at the lowest temperature, thus first, while the broad spectrum of actives will continue to release on up to over 100 degrees F hotter, thus secondarily. For over 1000 herbs and botanicals that can be used for phyto-inhalation these same vague benchmarks for approximation and experimentation are all that are available although with time and the acceptance of the delivery medium more information will become available. So for the time being, personal experimentation within a temperature range of about 260 degrees F to 390 degrees F is recommended and feedback requested…let us know what works best for you using the ranges given with what herbs. The lower temperatures will produce the cleanest vapor, obviously, while the higher temperatures will produce vapor and some minute quantities of smoke, while higher temperatures yet will produce vapor with smoke mixed. Most users will find themselves starting with it a bit smoky at the higher end of the temperature range and eventually transitioning towards the cleaner vapor lower in the temperature range once they get used to the timing of the heating and inhalations and the "less is more" nature of the concept itself. Only the SVT approach allows this type of transition and versatility. The optimum vaporization temperature settings for specific active constituents in various herbs or herbal blends can be determined by referencing the boiling points in the Merck Index and some minor experimentation using the temperature range given above and the corresponding rotary dial settings given below as benchmarks. **The recommended heat gun airflow setting is always the lowest possible** to minimize oxidation and the temperature settings for full spectrum vapor are as follows:

(**Note**: these settings are approximations based upon the 120V models and may be higher than necessary on the 230/240V models. **Also Note**: the rotary dials are not perfectly calibrated so the actual temperature at a particular setting on one gun may be a little different at the same setting on another gun of the same model. Decimal notation has been used for simplicity but only the whole number setting is marked on the rotary dials. Vaporization Chamber Bowl users will always be able to use a slightly lower temperature than reducer nozzle/standard bowl users due to differences in efficiency.)

Rotary Dial settings for Effective Aromatherapy Vaporization by model

Makita HG1100	Steinel HG3002	Steinel HL2002
Low end = “1.5” to “1.8”	Low end = “4.25” to “5” (260F-330F)	Low end = “3.5” to “5”
High end = “1.9” to “2.2”	High end = “5.25” to “6” (330F-390F)	High end = “5.25” to “7”

Many users find it helpful to tape the rotary dial in place with electrical or duct tape once they’ve found the setting that works best for them with a particular herb while using that herb. This minimizes the accidental adjustment of the rotary dial from handling the heat gun.

The **Makita** is a Steinel private label heat gun with all the necessary functional components that makes the Steinel guns the best in the world: ceramic encapsulated element, continuously variable thermo-coupled control, and variable fan settings, but without any bells and whistles. There isn’t any temperature display and the switches are basic but for the money the Makita is a great way to go.

The **Craftsman 27801 and the Steinel HL 2002 LE** is essentially the same heat gun with a different color casing and brand label. They feature a LED display that looks kind of cool but isn’t very functional for this application due to its limited display capabilities. Both feature nice switches that have a high and low (always use the low for extractions) and fan only setting. The fan only setting is convenient for fast cool down of the nozzle.

The **Steinel HG 3002 LCD or HL 2305 LCD** (for 230V European market users) are top of the line units that feature a LCD display that displays the nozzle temperature in 10F increments. This is the tool of choice for professional Aromatherapists and anyone else concerned with temperature accuracy. It enables the user to see the temperature fluctuations that occur with usage and adjust accordingly for the most precision extractions: i.e. draw harder as the temperature goes down, lighter as it goes up, and constant as it stabilizes. Vriptech International is pleased to offer the Steinel HG 3002 direct to its customers. The HG 3002 is available in both 120V and 230V versions. The HG 3002 features a separate fan control that can be covered with electrical or duct tape to lock it into the lowest setting and minimize accidental adjustment with usage.

The **Bosch 1943** is essentially the same heat gun as the Steinel HL 2002 and features the same LED display, but utilizes a different casing that is slightly smaller and has a knuckle protector on it that some users find convenient for holding the tool during extractions.

The **Bosch 1947** is essentially the same heat gun as the Steinel HG3002 and features the same LCD display, but also utilizes a different casing that is

slightly smaller and has a knuckle protector on it that some users find convenient for holding the tool during extractions.

Oil concentrates, Bubble, pastes, or oil dipped herbal materials, are most effectively vaporized by being broken or ground apart into as small of pieces as possible and sprinkled evenly across a bed of raw herbal material and may require the heat gun to be turned up above the effective setting for the corresponding herbal material the oil is derived from (the harder the oil concentrate the hotter, the softer the oil concentrate the closer to the regular temperature) and/or a longer pre-heat period. Concentrates will release active vapors for a very long time using the SVT and will require multiple Vrips to effectively get all of the actives that even a very small amount of concentrate contains. The use of concentrates for vaporization based phyto-inhalation is an extremely economical approach that yields a very smooth and potent vapor albeit eventually not as aromatic in taste as is yielded by a single, primary vapor inhalation, or Vrip, approach using the actual unrefined herbal material itself because the aromatic compounds that provide the flavor will usually be gone long before the rest of the actives. Don't use too much at a time! Many users like to freeze their concentrates then grind them into a powder in a grinder and sprinkle the powder on a very flavorful menthol herb like mint that will continue to release flavor for a very long time so that every inhalation has flavor.

In general, the lower the effective temperature setting the better the taste and purer the vapor quality. The "burnt popcorn" taste means the setting is too high and/or that too many inhalations where taken and can be visually affirmed by the herbal material turning a clear brown rather than just lightly yellowing or browning. A small range is given for the setting rather than an exact setting because the exact optimum setting (often found to be halfway between two of the calibration marks or between one of the reference numbers and the start of the calibration marks) depends upon a number of variables specific to the individual application such as rate and strength of user draw, number of consecutive Vrips taken, user preference of taste (some users like it clean and aromatic, others prefer it a bit smoky and are willing to sacrifice), actual electrical current, actual intake length, nozzle seating depth, etc. and will be easily realized with some experimentation on the user's part staying around the ranges given. The cleanest inhalations leave a dry, barely yellowed substrate behind.

Before use the heat guns should be allowed to warm-up and stabilize at the operational temperature selected; failure to allow for warm-up period could result in delayed vaporization or over heating once the heat gun's air flow is impeded by insertion into the Vaporization Chamber Bowl intake. If the reducer nozzle and a conventional bowl are being used, the nozzle should be aimed at varying direct angles about a quarter to half inch from the bowl while the user takes a more aggressive (especially when initially starting to take the Vrip) and longer draw than they would if normally smoking (the aggressive draw isn't

as necessary with the Vaporization Chamber Bowl, but definitely works and will enable a lower heat gun temperature setting to be used). **Many users find it helpful to take a strong, short draw to get the vapor releasing than take a fresh breath followed by a complete exhale then a long, sustained draw. Only the regular stock nozzle is used with the Vaporization Chamber Bowl and should be gently directed straight into the intake until it has reached a depth where it makes circumferential contact with the inner intake surface and seats**. **For optimum results with the Vaporization Chamber Bowl the heat flow is to be directed into the intake for approximately ten to thirty seconds before the user begins their initial inhalations and continually throughout the following exhale and the full course of their sustained, primary draw.** Depending upon the size of the water pipe and the corresponding stem being used, and upon the water level, the seating of the heat gun nozzle in the VCB intake may, or may not, force some heated air flow and eventual carried vapor to bubble through the water. Because the vapor is so much cleaner than smoke there is no real drawback to using a lower water level, in fact, some people use only ice in the ice catch for maximum potency.

It's important to keep the heat flow directly aimed at the bowl or into the intake (with the nozzle completely seated) throughout the course of the Vrip as the vegetable matter never combusts creating its own heat. Reducer nozzle with conventional bowl users without the capability to take an aggressive and long enough draw to effectively vaporize all of the active constituents out of a Vrip may find it necessary to pack smaller, looser Vrips using a cover screen as described above, or to flip the inhalation and Vrip it again with the other side exposed; the downside to flipping and re-Vrippng is that the "fresh" taste is somewhat sacrificed. Or they can opt to use the Vaporization Chamber Bowl (VCB) and pack finely chopped material to fit their needs and preferences.

It's important to keep in mind that since this technique enables the delivery of substantially more of the active constituents to the user than smoking or oral administration does the effects will be that much more intense; and thus, a smaller quantity of herbal material will be required to create the same level of intensity of effect than if consumed conventionally. However, if using the reducer nozzle and a conventional bowl the bowl needs to be sufficiently packed so that the heat flow is well dispersed through the herbal material. This is why a smaller one-inhalation v-style bowl tends to be most effective for SVT vaporizing if the Vaporization Chamber Bowl isn't opted for. Generally, the idea when packing a conventional bowl for vaporizing is to scissor or break the herbal material up before packing it and pack it tight enough so that it doesn't get blown out of the bowl, but loose enough to get decent air flow through the bowl. Because of the flow differences created by different size and shape bowls, varying strengths of user draw, and the range of densities of herbal material, variations on how the bowl is packed, i.e. packing it tighter or looser, reverse poking an inhalation to kind of pancake it towards the top of the bowl, etc. should be tried until an

approach that works best with the particular bowl, user, and herbal material being used is realized. If the Vaporization Chamber Bowl is used you'll simply want to scissor or grind up your herbal material and pack the desired quantity (usually 1/4 to 1/2 what is used for a conventional combustion inhalation or 1/3 an oral dose) on the screen, spread out to evenly distribute all the way across the screen, and then cap with the upper chamber forming intake cap using a threading motion; never push or pull the two pieces straight together or apart. **For users who desire more resistance to the draw, as with a conventional water pipe inhalations, simply pack the herbal material harder.**

The completeness of a Vrip can be verified by removing the material that remains (affectionately known as the load carcass or LC) by carefully stirring it out with a poker and/or blowing it out (never tap bowl on hard surfaces) and crushing it between your fingers before discarding it. It should be slightly yellowed or browned, and crush fairly easily between your fingers with little or no oily residue being left behind. If the remaining material resists crushing easily, and leaves a residual smell similar to that when it was first broken apart before heating, than it still contains some of the active constituents and can be extracted from again (and the quantity packed should be reduced for future Vrips until an ideal single-Vrip quantity is determined if it is full spectrum vapor that is desired).

Common sense caution should be utilized so as to prevent burns: both the bowl, surrounding stem and pipe bodies, and heat gun nozzle can get extremely hot with repeated use and may require some time to cool between multi-user, numerous Vrip sessions and before being stored for personal and fire safety reasons. Also a safe put-down spot for the gun such as a board or tile is recommended as during use the user, especially the new user, often fails to think about the ramifications of a hot heat gun nozzle being put down on carpet or upholstery, and it's better to be safe than sorry. If carpet or upholstery fiber becomes melted onto the nozzle because of careless placement, the nozzle should be cleaned with steel wool and wiped clean with a moist towel while holding the gun with nozzle facing downward. Be sure the nozzle is clean before extraction use again by bringing it up to operating temperature and inspecting for residue burn-off.

Although there is a bit more to the *Superior Vaporization Technique* than conventional smoking, popping some capsules or downing some tea or tincture, the benefits, both long and short, are more than substantial enough to justify the minimal extra effort. With a little practice SVT vaporizing will become as natural and ritualized as smoking and teatime…and besides it tastes and works better!

III. **Start Clean and Keep it Clean**

Because with the SVT the oil containing the active constituents in the herbal material is vaporized out of the plant material rather than burned, wasted, and sucked through into your pipe creating the unsightly foul smelling and taste affecting resinous coating that turns pipes black and nasty, it is recommend that

a clean start be made for cleanliness, hygiene, as well as symbolic purposes. This can be accomplished a couple of ways: 1. Buy a nice new glass waterpipe like one previously described and recommended (check out our VWTs) or otherwise; 2. Effectively clean the one you already own.

If you decide to go with method number two you have a few great options. One is to purchase the new and improved “De-Solve It” brand citrus solvent that comes in a handy spray bottle and save some serious time and effort. This stuff works so good it will blow you away, and unlike some of the pipe cleaning compounds often found at smoke shops contains no artificial residual fragrances and can be rinsed completely clean with basic soap and hot water. There are numerous cleaning compounds out there, but you can literally make your pipe like new again with this stuff and some rock salt for an abrasive. Just put some De-Solve It and some rock salt in the tool and some wadded up paper towels in the stem and intake for plugs and give it some good shaking and then use some brushes, Q-tips and/or pipe cleaners for the stem and chase with hot water and soap. If it’s really nasty you may want to allow the De-Solve It to soak in first. This same technique works well using alcohol as well if the De-Solve it isn’t available.

Once you’ve embraced the *Superior Vaporization Technique* you’ll need even less effort, less of the time, to keep your tools clean. To periodically clean out the pure golden oil residue that will collect in the stem and the lower bowl portion of your Vaporization Chamber Bowl without wasting this valuable resource you can do one of two things. A quick clean can be accomplished by first carefully removing the o-rings and screen, secondly, hold the bowl with protective gloves, heating pad, or tongs and heat the stem using the heat gun until the oil residue begins to liquefy, thirdly, take a small piece of herbal material balled up and carefully insert it into the bottom of the stem at which point you can use a poker and very carefully push a ball of herbal material straight up the stem to the bottom of the bowl and then reverse the poker and push the ball of herbal material down and out of the stem collecting the oil in the process. **This ball of herbal material coated in oil residue should be treated with respect, as its potency will be extremely high.** Another way to clean your tools without wasting the collected essential oil that takes a bit longer and must be done more often, but is well worth it, is to use an alcohol soak. Fill your VWT with alcohol to above the residue line and allow to soak overnight or longer on a fairly regular basis. Use the same alcohol in a suitable container and soak your VCB lower bowl with the o-rings removed daily when not in use. The golden alcohol extract you'll be left with can be used repeatedly for cleaning soaks until eventually it is poured into a larger glass dish and allowed to evaporate at which point the oil residue can be scraped up and collected. **Again be aware of the fact that this oil residue will be extremely potent!**

Be careful in your cleaning efforts; however, as Pyrex glass is fragile and expensive and will break easily with misdirected force.

IV. **Implement Sources**

The **Makita HG1100** heat gun, the most basic and least expensive, is available in both a U.S. 110V and an Int. 230/240V version and can be special ordered through most hardware stores that carry Makita power tools, as it's unlikely that it would be stocked. If you live near one you may be able to buy your heat gun from a contractor supply that carries Makita for the contractor's price that should be closer to $80.00US to $90.00US. There are several U.S. venders on the web that sell it very competitively and will probably prove to be the best source for most 110V users…one tried and true source is www.makita-direct.com where the heat gun itself is priced at $79.00US and the reducer nozzle is priced at $8.95 (note: as of the publish date of this manual the above prices were current but the reducer nozzle wasn't shown on the sight, but was stocked and/or available; the 800-232-8216 phone order line given on the site will put you in touch with an order representative who should be able to take care of the complete order. Another source is www.buyitnow.com that sells the gun for even less, $68.95US, but will charge more for shipping and handling and must always special order the reducer nozzle. Yet another source is www.mytoolstore.com which sells the gun for $66.41US and ships it from Los Angeles for real quick West Coast deliveries. If you shop it harder prices as low as $62 have been reported.

Steinel is the German heat technology company that designed and manufactures most of the high end heat guns on the market and also has their own models of high end heat guns: the **Steinel HG 3002 LCD and HL 2002 LE or HL 2005 E and HL 2305 LCD** for International 230/240V users. These are excellent heat guns the 3002 or 2305 LCD models being the Twin Turbo Porsches of the bunch (with the price to match at $180+), but are of very limited availability in North America, while widely available in Europe. VripTech Int. can now offer the Steinel HG 3002 heat guns (both 110V US version and 230V Euro plug) direct until our own use-specific heat tool is ready for market…stay tuned!

The top of the line Sears **Craftsman part #27801** heat gun (around $100-$120) is basically a Steinel 2002 LED with the Craftsman name on it. This is a great heat gun at a great price that is becoming less available as it is being phased out and replaced with a new model. It may be available at your local Sears store or may be able to be ordered through the Craftsman 1-800 order line at 1-800-377-7414 for $97.99 plus S&H.

Although the LCD temperature readout or LED temperature gauge are definitely cool features to look at the main functional advantages to the more expensive heat guns is that the switches tend to be preferred over the one on the Makita and the fan can be run independent of the heating element to cool down the nozzle quicker for packing it up and putting it away, whereas the Makita must be allowed to cool unassisted.

International 230/240V users should do a search using "Makita" or "Steinel" or "Bosch" as their keyword utilizing regional search engines for

local sources or check with the local hardware stores and/or contractor suppliers that sell these brands.

The VripTech International **Vaporization Chamber Bowl (VCB)** and **Vaporization Water Tools (VWT)** are currently available only through the VripTech web site at **www.vriptech.com** and through select dealers.

V. Benefits and Advantages

The conventional use of cigarettes or pipes for inhaling of aromatherapeutic herb smoke is recognized as delivering numerous irritants and likely carcinogens along with the desired active constituents to the tracheobronchial tree and oral cavity. Effective vaporization separates out the more therapeutic and/or active chemical components from the crude plant or resin impurities and breakdown products of pyrrolysis. In other words, vaporization enables a significant reduction, if not near complete elimination, of the known or very likely harmful byproducts of inhaling aromatherapeutic herb smoke, yet at the same time, enables the highly effective delivery of the known active or very likely therapeutic principles of the same (the quicker the delivery the more active the principles). This is called rapid-onset delivery because of how fast it gets into your bloodstream; vaporization is second only to sub-cutaneous delivery, or injection in terms of rate of delivery and considerably faster than oral delivery.

The *Superior Vaporization Technique* enables vaporization without the use of a clumsy and awkward construct. Vaporization is enabled within the bowl on many commonly used pipes, or alternatively for optimum results, within the Vaporization Chamber Bowl used as a replacement for a conventional bowl on most common water pipes (so you can not only keep your trusty water pipe, but greatly improve its effectiveness). And perhaps most importantly, it enables some semblance of a familiar ritual associated with smoking to be maintained rather than sacrificed to gain the benefits of vaporization.

Other benefits over smoking, oral administration, and other vaporization techniques include a consistently improved taste (ceramic encapsulated elements ensure a non-metallic taste), an intensification of effects (by enabling rapid vapor delivery by skipping the collection phase of conventional vaporizers and the delay of oral administered dosages the *Superior Vaporization Technique* truly excels in this area), a more economical means of delivery (more than twice the actives delivered), a better smelling pipe, filter water, and living environment (no smoke to absorb into carpet, upholstery, and drapes), and hundreds if not thousands of alternative heat gun uses…if you ever need to bend some plastic tubing, soften putty, loosen tiles, strip paint or varnish, etc. your fully and professionally prepared (but keep the nozzle clean for extraction purposes)!

The *Superior Vaporization Technique* has multi herb versatility and functional advantages over conventional vaporizers which are rarely temperature adjustable; and thus, usually come set-up for the higher end of the temperature

range only making them limited in use. Because the *Superior Vaporization Technique* relies on a temperature adjustable heat gun for its heat source it can be dialed in for use with virtually any aromatherapeutic herbal material.

VI. Still To Come

It is a firmly held belief of the many now enlightened, that the *Superior Vaporization Technique* as represented utilizing the patented VripTech Vaporization Chamber Bowl is currently the best means by which to achieve the desired end of satisfying, easy, effective, and enjoyable vaporization of the active components in commonly used aromatherapeutic herbal materials; however, the industrial heat guns are obviously more than is needed. A smaller, easier to transport, and more economical means by which to achieve the same ends has been engineered, but the realities of manufacturing, and readying for market such a device will have it that the industrial heat guns will remain the best means by which to enable the SVT for some time to come so please don't let the possibility of something else prevent you from adapting the SVT now as the saved herbal material alone will justify the purchase if the numerous other benefits aren't enough for you. Check the website periodically for more info regarding our Vaporization Heat Tool, or VHT. The *Superior Vaporization Technique* is the medium of the Aughts available today…make a difference in the new millennium by sharing it with others and stay posted to our web site for future product developments, studies, and other aromatherapy related information. One Vrip is all it takes! Thanks for the interest and always remember to Vrip safely and responsibly! All One!

VII. References

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